DATE: October 27, 2005

FROM: Matthew A. Barron, Contracting Officer

TO: All Prospective Applicants

SUBJECT: Modification No. 001 to the Grants Notice in Grants.gov for Announcement No. DE-PS36-06GO96000, FY2006 Industrial Assessment Center

This modification is to update and replace the Grants Notice posted in Grants.gov on July 18, 2005; as a result of recent changes in anticipated program funding that necessitated the reduction in planned awards under this Funding Opportunity Announcement. Accordingly, the Grants Notice posted in Grants.gov is modified to read as follows:

| | |
|---|---|
| Document Type: | Grants Notice |
| Funding Opportunity Number: | DE-PS36-06GO96000 |
| Posted Date: | October 25, 2005 |
| Original Due Date for Applications: | Jan 17, 2006 |
| Current Due Date for Applications: | Jan 24, 2006 |
| Archive Date: | Nov 14, 2006 |
| Funding Instrument Type: | Cooperative Agreement |
| Category of Funding Activity: | Energy |
| Expected Number of Awards: | 15 |
| Estimated Total Program Funding: | $6,000,000.00 |
| Award Ceiling: | $500,000.00 |
| Award Floor: | $360,000.00 |
| CFDA Number: | 81.086 -- Conservation Research and Development |
| Cost Sharing or Matching Requirement: | No |

## a) Eligible Applicants

Others (see text field entitled "Additional Information on Eligibility" for clarification)

Additional Information on Eligibility:

To be eligible, applicant institutions must satisfy the following requirements:

- Be located in the United States.
- Be a college or school of engineering that is an integral part of its institutional structure and that has at least one of its four-year undergraduate programs accredited by the Engineering Accreditation Commission or the Technology Accreditation Commission of the Accreditation

Board for Engineering and Technology (ABET). (The IAC must be in the engineering department that holds the programmatic ABET accreditation.)

These restrictions ensure that applicants have the necessary engineering curriculum and faculty in place to successfully launch and maintain an Industrial Assessment Center (IAC) at their university. Since one of the two primary goals of the IAC program is the education/training of "tomorrow's energy engineers", it is essential that a strong engineering activity is in place.

## b) Agency Name

U.S. Department of Energy, Golden Field Office, 1617 Cole Boulevard Golden, CO 80401

## c) Description

This is a restricted eligibility announcement. Eligibility is restricted to a college or school of engineering located in the United States which has at least one of its four year undergraduate programs accredited by the Engineering Accreditation Commission or the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

The Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) Golden Field Office (GO) is soliciting applications for Industrial Assessment Centers (IACs or Centers). The IAC program is a university-based educational program to promote the training of young engineers in the understanding of the role of energy efficiency and renewable energy practices in basic manufacturing process systems and operations. The IAC program enables small and medium-sized manufacturers (those with energy costs between $100,000 and $2.5 million per year) to have comprehensive assessments performed at no cost to the manufacturer. Teams of engineering faculty and students from the Centers conduct assessments and provide training to help regional manufacturers operate more efficiently and improve competitiveness. The goals of the IAC program are to: provide engineering students with practical experience and training in energy engineering; help small- and medium-sized manufacturers identify opportunities to improve energy efficiency, minimize waste, and improve productivity; integrate the IAC program into other Industrial Technology Program (ITP) and EERE program areas and activities, where feasible; and create innovative approaches to delivering IAC, Industrial Technology Program (ITP) and EERE services, educational opportunities, and regional outreach.

The IAC program, as defined in this Funding Opportunity Announcement (FOA), will consist of two elements: the IAC base program and the IAC Specialist Center. At a minimum, applicants must apply for the IAC base program portion of the work. Applicants may apply for the Specialist Center portion of the work as an add-on to the IAC base program element. The IAC base program will consist of the conduct of IAC assessments, as defined later in this document, and the associated practical, hands-on training of undergraduate and graduate students in industrial energy, waste and productivity assessment skills. Specialist Center applicants will also apply to take a leadership role in a specific energy efficiency technology area, or as a Specialist Center in a specific manufacturing system that has a substantial energy component as characterized by the EERE / Industrial Technology Program (ITP) Energy Management software tools and training.

In addition, the IAC program will entertain, within this FOA, modified Center configurations to facilitate the delivery of the key program elements. In the modified configurations, the prime applicant must meet all qualifications as outlined in this FOA, and will be considered the prime awardee, if selected to negotiate for award. Other institutions involved as described below (Protégé, Satellite or other) will operate as subcontracts to the prime awardee, and are not required to meet all of the prime applicant qualifications (such as accreditation by the Engineering Accreditation Commission or the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET)). These modified configurations include such examples as:

- Mentor / Protégé Centers: One location that meets the program qualification criteria will serve as the Mentor Center and assume the lead role. A second location will serve as the Protégé Center. The Protégé Center will not be required to assume the same level of responsibility and requirements as the Mentor Center but will have the opportunity to gain skills and knowledge in industrial assessments from the Mentor Center.
- Satellite Centers: One location that meets the program qualification criteria will serve as the Main Center and assume the lead role. One or more satellite locations, typically other campuses of the same University system, may be included to perform certain elements of the work – under strict guidance and supervision of the Main Center.
- Other configurations may be considered with the qualification that the Main Applicant Center assume the full responsibility to meet all qualification and performance requirements of the program.

Minority institutions are encouraged to apply as the prime applicant (Mentor Center or Main Center) or as a Protégé or Satellite Center.

It is anticipated that this FOA will result in the selection of approximately 12-16 IACs located within ABET accredited engineering programs at universities throughout the nation. Each IAC will meet the criteria and qualifications to be an IAC base program Center, with or without a modified configuration. An IAC Center selected under this FOA may also be a Specialist Center.

The award instrument utilized for this FOA will be cooperative agreements with a project period of up to five years in duration. Subject to funding availability, the total DOE funding available under this FOA is anticipated to be approximately $6,000,000 ($3,000,000 per year for the first two years.) Each IAC will conduct approximately 15 – 35 assessment days and train/employ approximately 5-10 students per year. All Centers selected for award under this FOA will be evaluated on their performance after the first 12 months of operation. Centers not able to meet performance criteria will not be continued for the balance of the project period.

Funding amounts, per Center per year, are based on the combination of proposed assessment days and Specialist Center activities, if relevant. It is anticipated that not more than $250,000 per year would be awarded to any individual Center for all activities, under the current funding profile. DOE operates under the premise that to conduct each assessment day, from start to finish including all reporting and follow-up, will cost approximately $8,000. However, this amount varies across institutions. The selection of the number of assessment days the Center will perform should be based on: (1) the estimated institutional cost of performing an assessment day; (2) the Center's level of past experience; and (3) the decision to include Specialist Center activities. All Centers must propose a minimum of 15 assessment days and may not exceed a maximum of 35 assessment days. It is highly recommended that new Centers propose fewer assessment

days in the earlier years of the project period at a lower budget level, with growth in future years encouraged.
Specialist Center activities, which might include peer, student and client training, system-specific assessments, or other related activities, would make up the balance of the annual budget request, within the parameters noted above. Specialist Center activities must fall within the overall budget ceiling. It is also expected that institutions awarded Specialist Center activities will be required to collect and maintain results of their activities and report results as appropriate to the IAC database and/or in case studies.
The DOE has established performance goals and expectations for the IAC program. These performance goals are focused upon reducing U.S. energy consumption and energy expenditures. The collection of benefits generated by the individual centers within the program is the foundation for program performance metrics. To this extent, Centers should strive to achieve the following benefits: completion of approximately 15 - 35 assessment days per year per center configuration; achieving an average total cost savings of $60,000 per year for each assessment (this includes approximately $30,000 in energy-related cost savings); and employing/training approximately 5-10 engineering students per center annually. DOE also expects that the focal point of each IAC is the comprehensive training and assessment experience received by the IAC student. This includes: (1) hands-on assessment experience; (2) additional training in industrial energy systems including, but not limited to, Industrial Technology Program Energy System Tools End-User and Qualified Specialist training; (3) attending professional meetings; (4) technical report writing; and (5) academic coursework.
Financial Assistance for this program is authorized by Public Law 102-486, Section 2101, Education and Outreach.

**Background information on the IAC program**

The IAC's major focus is to reduce the consumption of energy by U.S. industry through serving the needs of small and medium-sized local manufacturers. These needs relate chiefly to energy, waste and productivity associated with the manufacturing processes, but also include other aspects of a manufacturer's energy uses. The IAC serves manufacturers by analyzing the operating characteristics and energy, waste and productivity efficiency of manufacturing facilities; identification, quantification, and recommendation of specific opportunities to improve energy efficiency, reduce waste, and improve productivity as it relates to energy impact; and to report the findings to the facility in writing, together with detailed estimates of the savings, implementation costs, and payback periods. Under the leadership and supervision of Center professional staff, students are integral contributors to center operations, including conduct of site visits, data analysis and report preparation. While student involvement is strong, the IAC director holds the ultimate responsibility for the overall quality of the assessment experience, technical recommendations and the assessment report.
In addition to providing energy, waste and productivity assessments to small and medium-sized manufacturing facilities, the IAC program plays a key role in educating and training engineering students in assessment practices with an emphasis on the energy-related aspects. IAC Centers are, first and foremost, academic training institutions. The IAC program has a long and proven track record of placing a high number of IAC graduates into energy-related careers and generating advanced degree topics and academic research related to industrial energy efficiency. IAC Centers are also noted for their objective expertise in the industrial manufacturing energy field within their region.

The Technical Field Manager (FM), located at the Center for Advanced Energy Systems at Rutgers University, has served as a primary technical interface for DOE in the IAC program since 1992. In this capacity, the Technical Field Manager serves several roles:

- Technical – The FM hosts and maintains the IAC assessment database for the program: a unique resource available to the public on the internet. They provide the technical oversight necessary in the program by reviewing the assessment reports to ensure the accuracy of the relevant data incorporated into this database. In particular, the FM supplies valuable input regarding the current state of energy saving technologies and evolving energy markets. The FM offers training and training materials for both experienced and new centers as well as outside entities. Additionally, the FM ensures that center personnel and student utilization are appropriate.
- Promotional – The FM maintains a website (referenced below) which is the gateway to the database and the program for many users interested in industrial energy savings. This database, representing over 12,000 assessment results, is offered free of charge, both in the original format as well as through an interactive interface that allows searches for common subjects. The site is also the home for IAC Case Studies, Energy Assessment Manuals, and other technical documents, such as the Self Assessment Guide for smaller clients that would like to help themselves. The FM encourages centers to leverage the program by integrating their activities with state agencies, utilities and private-sector organizations, developing curricula related to IAC work, and using multidisciplinary approaches to enhance energy efficiency.

While the IAC program tends to follow a fairly well-established path in terms of program expectations, activities and requirements are subject to periodic modifications due to changing program priorities, or federal budget scenarios. Participating institutions must be willing to accept and accommodate these periodic changes as the "way of doing business." IAC program and Technical Field Management organization guidelines and protocols will be revised as necessary throughout the project period to provide guidance on issues such as staffing, student requirements, and assessment specifics.

Additional information about the current status of the IAC program, the IAC Technical Field Manager, universities currently participating in the program, IAC student activities and DOE's portfolio of EERE programs may be found at http://www.oit.doe.gov/iac/, http://www.iac.rutgers.edu/, http://www.iacforum.org and http://www.eere.doe.gov.

**Only the Grants Notice posted July 18, 2005, in Grants.gov has been modified. The Announcement remains unchanged**.